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## Monday Program

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*All sessions and events are located in the Walter E. Washington Convention Center.*

Hot Coffee and Tea – compliments of Kaplan K12 Learning Services  
*(ticket not required)*

Opening Session

Keynote Address

Session Types:

First Timer's Session

Major Sessions

Regular Sessions

Double Sessions

Commercial Sessions:

Sponsor Showcases

Technology Showcases

Ticketed Events:

Box Lunch – Sponsored by Didax *(ticket required)*

Regional Leadership Teams Meeting *(invited teams only)*

### **Sponsor Displays**

Hall B: 11:00 am – 5:00 pm

### **Registration**

Hall B: 6:45 am – 5:00 pm

Use the **Conference Planner** on page 107 to outline your daily schedule.

Wear your NCSM **Conference Name Badge** to gain entrance to sessions, ticketed events, and the sponsor display area.

Follow **Fire Code** standards in Sessions: no standing, no sitting on the floor, no moving of chairs from another room.

## **Program Summary Information for Monday, April 20, 2009**

**See page 7 for Conference Strand descriptions.**

## Monday Summary

<b>7:00–7:30:</b> Hot Coffee and Tea (no ticket required), compliments of Kaplan K12 Learning Services, 146ABC Concourse <b>7:30–8:00:</b> Session 1, Opening Session, Steve Robinson, Timothy Kanold, Terri Belcher, Susan Beal, 146 ABC <b>8:00–9:00:</b> Session 2, Keynote Address, Kati Haycock, 146ABC						
	<b>140AB</b>	<b>143AB</b>	<b>143C</b>	<b>144A</b>	<b>144BC</b>	<b>145A</b>
<b>9:30</b>	<b>Session 19</b> Middle (6–8), Strand 1 <b>Gross, A Professional Development Institute for Administrators for Improving Mathematics Learning for Students with Disabilities</b>	<b>Session 5</b> General, Strand 6 <b>Campbel, Malkus, The Impact of Elementary Mathematics Coaches on Student Achievement and Teachers</b>	<b>Session 6</b> General, Strand 7 <b>Joyner, Mawhinney, Broadway, Partners for Mathematics Learning</b>	<b>Session 7</b> General, Strand 4 <b>Schmidt, Hall, Accessibility and Assessment: What Is Universal Design and How Is It Used in Building Assessments?</b>	<b>Session 8</b> General, Strand 1 <b>Russell, Bastable, Schifter, Early Algebra and Computational Fluency: How “Struggling” and “Advanced” Learners Learn about the Meaning of Operations</b>	<b>Session 4</b> General, First Timer’s Session <b>Zimmer, What’s It All About? An Orientation for Those New to the NCSM Annual Conference</b>
<b>10:30</b> <b>10:45</b>		<b>Session 29</b> Intermediate (3–5), Strand 4 <b>Nesbitt, Messler, Using Data Analysis to Support Conceptual Instruction and Improve Mathematics Scores on High Stakes Assessments</b>	<b>Session 22</b> General, Strand 7 <b>Bradley, Kinzer, Systems-Based District Leadership Teams: Creating a Culture for Mathematics Learning</b>	<b>Session 31</b> Middle (6–8), Strand 1 <b>Bright, Meeting the Needs of English Language Learners: What Mathematics Teachers Need to Know</b>	<b>Session 23</b> Secondary (9–12), Strand 7 <b>Pomeroy, Watts, Professional Learning Communities: Teachers and Administrators Working Collaboratively to Enhance Learning</b>	<b>Session 24</b> General, Strand 2 <b>Griffin, Lavelle, Video Study Groups: The Focus Is on Student Learning</b>
<b>11:30</b> <b>11:45</b>	<b>11:30:</b> Session 34, Box Lunch (ticket required 11:30–12:45; wait-list ticket required 12:45–1:00), sponsored by Didax, Hall B					
<b>12:00</b> <b>12:15</b>	<b>Session 35</b> General, Strand 7 <b>Mumme, Carroll, Professional Development Practices that Support the Development of Teachers’ Mathematical Knowledge for Teaching</b>	<b>Session 47</b> Middle (6–8), Strand 1 <b>Woodward, High Standards for Middle Students with Mathematics Difficulties</b>	<b>Session 42</b> General, Strand 2 <b>Risley, Hogan, Building Instructional Capacity: Mathematics Coaching in Aurora Public Schools</b>	<b>Session 49</b> Secondary (9–12), Strand 7 <b>Gilbert, Gilbert, Communities of Practice to Press Content Knowledge for Teaching Mathematics</b>	<b>Session 43</b> General, Strand 2 <b>Boswell, Mitchell, Knowing and Modeling PRIME Teaching and Learning Leadership!</b>	<b>Session 36</b> General, Strand 3 <b>Bouck, Burrill, Understanding Curriculum Coherence, Why it is Important, and Tools for Helping Districts Achieve It</b>
<b>1:15</b> <b>1:30</b>		<b>Session 56</b> Intermediate (3–5), Strand 3 <b>Jones, Silbey, Powell, Stephens, Math Foundations: Focused Intervention for Long-Term Student Success</b>	<b>Session 57</b> Intermediate (3–5), Strand 2 <b>Rowan, Inquiry Groups: Leading Elementary Teachers and Children to See Mathematics as Thinking!</b>	<b>Session 62</b> College, Strand 2 <b>Schrock, Gilliland, Supervision of Student Teachers using PRIME Standards</b>	<b>Session 60</b> General, Strand 2 <b>Gorman, Nikula, Resources and Strategies for Building a Strong Mathematical Focus into the Lesson Study Practice of New and Experienced Teams</b>	
<b>2:00</b> <b>2:30</b>						

11:00: Exhibit Hall Open

## Monday Summary

	140AB	143AB	143C	144A	144BC	145A	
2:30	<b>Session 68</b> Middle (6–8), Strand 6 <b>Kriegler, Raff, Who Should Take Algebra in 8th Grade?... and What To Do If Student's Aren't Ready</b>	<b>Session 72</b> General, Strand 7 <b>Paschal, Designing a New Teacher Induction Program for Mathematics Teachers</b>	<b>Session 73</b> General, Strand 3 <b>Hart, Spitzli, Enacting New Mandatory State Guidelines for K-12 Mathematics by Connecting Curriculum, Instruction, Assessment, Research, and Professional Learning</b>	<b>Session 79</b> Intermediate (3–5), Strand 3 <b>Jenoure, Emond, Integration of Mathematics, Science, and Literacy</b>	<b>Session 74</b> General, Strand 1 <b>Fulmore, Kanold, Knowing and Modeling PRIME Equity Leadership!</b>	<b>Session 69</b> Middle (6–8), Strand 1 <b>Kinch, Teaching Mathematics to English Learners—An English Language Development/Mathematics Partnership</b>	Exhibit Hall Open
2:45							
3:45							
4:00	<b>Session 84</b> General, Strand 3 <b>Forgione, Slover, Providing an International Lens to Curriculum Leadership: Achieve's International Benchmarking Project</b>	<b>Session 85</b> General, Strand 1 <b>Fielder, Effective Classroom Practices that Bring ALL Students into the Mathematics Community!</b>	<b>Session 91</b> Middle (6–8), Strand 2 <b>Girardi, Vaden, Developing Leadership in Site-Based Coaches</b>	<b>Session 86</b> General, Strand 2 <b>Martin, Sauer, O'Clair, Developing Instructional Leadership in Mathematics: Accepting Responsibility for Every Student</b>			
4:30							
5:00							
<b>5:15–6:45:</b> Session 95, NCSM Regional Leadership Team Meeting (by invitation only), 151B							

## Monday Summary

<b>7:00–7:30:</b> Hot Coffee and Tea (no ticket required), compliments of Kaplan K12 Learning Services, 146ABC Concourse <b>7:30–8:00:</b> Session 1, Opening Session, Steve Robinson, Timothy Kanold, Terri Belcher, Susan Beal, 146 ABC <b>8:00–9:00:</b> Session 2, Keynote Address, Kati Haycock, 146ABC						
	<b>145B</b>	<b>146ABC</b>	<b>147A</b>	<b>147B</b>	<b>149AB</b>	<b>150A</b>
<b>9:30</b>	<b>Session 20</b> Middle (6–8), Strand 7 <b>Manon, McCarthy, Fernsler, Lessons Learned: A Statewide Professional Learning Community Tackles the Problem of At-Risk Learners through Video-Based Action Research</b>	<b>Session 3: Major Secondary (9–12)</b> <b>Usiskin, Four Years From First-Year Algebra to Calculus Is Not Enough</b>	<b>Session 14: ETA Cuisenaire Sponsor Showcase</b> Intermediate (3–5) <b>Gojak, Paths to Problem Solving</b>	<b>Session 15: Agile Mind Technology Showcase</b> General, Technology Showcase <b>Cook, Hull, Using Technology for Student Success in 6-12 Mathematics</b>	<b>Session 16</b> General, Strand 7 <b>Shaneyfelt, Miller, Teacher Learning Through Observing Student Learning</b>	<b>Session 11</b> Intermediate (3–5), Strand 2 <b>Silbey, The Mathematics Coach: Promoting PRIME Teaching and Learning for All</b>
<b>10:30</b>						<b>Session 25</b> General, Strand 2 <b>Friedland, Hill, McMillen, Beyond the Word Wall: Using Literacy Strategies in Mathematics Instruction</b>
<b>10:45</b>						
<b>11:30</b>						
<b>11:45</b>						
<b>11:30:</b> Session 34, Box Lunch (ticket required 11:30–12:45; wait-list ticket required 12:45–1:00), sponsored by Didax, Hall B						
<b>12:00</b>	<b>Session 37</b> General, Strand 2 <b>Jacobs, Williams, Partnerships that Work: Inclusion and Collaborative Team Teaching for Student Achievement</b>			<b>Session 38</b> General, Strand 2 <b>Gibson, McHugh, Breitbart, Supporting Teachers as They Use Effective Questioning Techniques to Engage All Learners</b>		
<b>12:15</b>	<b>Session 41: Major General</b> <b>Greenes Proportional Reasoning and Success with Algebra: The Incredible Hulk and The Shrunken Kids</b>			<b>Session 52: Carnegie Learning Technology Showcase</b> <b>Bartle, Lewis, Carnegie Learning Adaptive Math Solutions—Flexible, Research-Based Math Solutions for All Middle and High School Students</b>		<b>Session 44</b> General, Strand 7 <b>Charles, Lobato, Essential Understandings Book Series: “Professional Development Tools for Engaging Teachers with Mathematics, Grades 6-8”</b>
<b>1:15</b>						
<b>1:30</b>	<b>Session 53: Major General</b> <b>Hiebert, Guaranteeing Improved Classroom Teaching in 20 Years: What Should We Do Tomorrow?</b>			<b>Session 64</b> General, Technology Showcase <b>Jackiw, Key Curriculum Press Technology Showcase: A Sneak-Preview of Sketchpad Version 5</b>		<b>Session 58</b> Intermediate (3–5), Strand 6 <b>Columba, Teaching and Learning Basic Facts Using Online Tools</b>
<b>2:00</b>						
<b>2:30</b>						

**11:00: Exhibit Hall Open**

## Monday Summary

	145B	146ABC	147A	147B	149AB	150A	
<b>2:30</b>	<b>Session 67</b> Intermediate (3–5), Strand 7 <b>Fierle, Murawski,</b> <i>Leading Professional Learning Communities: Key Ingredients to Developing Mathematical Understanding</i>	<b>Session 71: Major General</b> <b>Weiss, Heck,</b> <i>Addressing Challenges in Designing and Implementing Teacher Professional Development Programs: Drawing on the Evidence</i>	<b>Session 81: Pearson Sponsor Showcase</b> General <b>Rogers,</b> <i>Power Up with Scott Foresman—Addison Wesley enVisionMATH</i>	<b>Session 82: Pearson Technology Showcase</b> General <b>House,</b> <i>Improving Student Success Through Better Engagement—Math XL for School</i>	<b>Session 65</b> General, Strand 4 <b>Clarke, Downton, Roche, Knight,</b> <i>The One-on-One Assessment Interview: A Powerful Tool for Teacher Professional Development</i>	<b>Session 80</b> Secondary (9–12), Strand 5 <b>Osthus,</b> <i>Using a Computer Algebra System to Provide Equal Access to Algebra for All Students</i>	<b>Exhibit Hall Open</b>
<b>2:45</b>							
<b>3:45</b>							
<b>4:00</b>	<b>Session 83: Major General</b> <b>Etuk,</b> <i>Educational Gaming—A Trend Line to the Future</i>	<b>Session 93: Key Curriculum Press Sponsor Showcase</b> General <b>Boaler,</b> <i>Beautiful Mathematics—How Successful Approaches Change Students' Lives</i>	<b>Session 94: CASIO Technology Showcase</b> General <b>Nevels,</b> <i>Experience the NEW Functions and Interface of CASIO's <math>f_x</math>-ES Plus Scientific Calculators</i>		<b>Session 87</b> General, Strand 1 <b>Olson, Okazaki, Olson,</b> <i>An Examination of Gender Differences in Language Used by Parents and Children Working on Mathematical Tasks</i>		
<b>4:30</b>							
<b>5:00</b>							
<b>5:15–6:45:</b> Session 95, NCSM Regional Leadership Team Meeting (by invitation only), 151B							

## Monday Summary

**7:00–7:30:** Hot Coffee and Tea (no ticket required), compliments of Kaplan K12 Learning Services, 146ABC Concourse

**7:30–8:00:** Session 1, Opening Session, Steve Robinson, Timothy Kanold, Terri Belcher, Susan Beal, 146 ABC

**8:00–9:00:** Session 2, Keynote Address, Kati Haycock, 146ABC

	150B	151A	151B	152A	152B	154AB
9:30	<b>Session 13</b> College, Strand 5 <i>Caniglia, Inspiring Technology Integration: The Case of TI Nspire</i>	<b>Session 10</b> Primary (PK–2), Strand 4 <i>Ginsburg, Chiong, Using Formative Assessment Data to Build Student Profiles and Make Links to Instruction</i>	<b>Session 17</b> Primary (PK–2), Strand 2 <i>Tickle, Developing Number Sense and Mental Strategies in All Students through a Deep Understanding of Place Value</i>	<b>Session 9</b> General, Strand 2 <i>Bradsby, Leinwand, A Collaborative Discussion with NCSM Past Presidents about Improving Classroom Mathematics Instruction</i>	<b>Session 12</b> Secondary (9–12), Strand 7 <i>Burrill, Developing an Understanding of Teaching by Doing Mathematics</i>	<b>Session 18</b> Primary (PK–2), Strand 2 <i>Hollister, Storeygard, Murray, Supporting the Development of Computational Fluency: Examining Classroom Practice Using Video and Cases</i>
10:30						
10:45	<b>Session 26</b> General, Strand 1 <i>Terman, Guzman, Leadership for Equity in Mathematics Education: Why It Matters and What to Do About It</i>	<b>Session 27</b> General, Strand 7 <i>Rathmell, Otto, Lubinski, Essential Understandings NCTM Book Series: "Multiplication and Division, Grades 3–5," Prof. Dev. Tools for Engaging Teachers with Mathematics</i>		<b>Session 28</b> General, Strand 7 <i>Felux, Partnering with School Principals to Improve Mathematics Instruction</i>	<b>Session 30</b> Intermediate (3–5), Strand 3 <i>Irons, Professional Development Strategies to Promote Change in the Teaching of Computation</i>	
11:30						
11:45	<b>11:30:</b> Session 34, Box Lunch (ticket required 11:30–12:45; wait-list ticket required 12:45–1:00), sponsored by Didax, Hall B					
12:00			<b>Session 39</b> General, Strand 1 <i>Engblom-Bradley, Barta, Silverman, Ethnomathematics Solutions to Equity: North American Study Group of Ethnomathematics (NASGEm) Panel</i>			<b>Session 40</b> General, Strand 3 <i>Horowitz, Park, Harvey, Engaging Parents in Mathematical Thinking: Parent Workshops to Support Successful District-Wide Curriculum Implementation</i>
12:15	<b>Session 46</b> Intermediate (3–5), Strand 2 <i>Moynihan, Priming Principals as Partners: Using Mathematical Vocabulary as the Pump</i>	<b>Session 50</b> Secondary (9–12), Strand 1 <i>Roane, Too Little, Too Late? One District's Approach to the Promise and Challenges of High School Mathematics ELLs</i>		<b>Session 48</b> Middle (6–8), Strand 3 <i>Sheffield, Adding Depth and Complexity to the Middle Grades Mathematics Curriculum</i>	<b>Session 45</b> General, Strand 4 <i>Wilson, Gilliland, Brown, Brown, Lessons from the Field: Evaluating Large-Scale Assessments</i>	
1:15						
1:30	<b>Session 61</b> Secondary (9–12), Strand 7 <i>Wilson, Lloyd, Beckmann, Cooney, Essential Understandings Book Series: "Professional Development Tools for Engaging Teachers with Mathematics, Grades 9–12"</i>	<b>Session 59</b> Middle (6–8), Strand 7 <i>Lin, Teszeri, Making Connections—A Mathematics Transitions Project</i>		<b>Session 55</b> Primary (PK–2), Strand 4 <i>Pfeiffer, Kelly, Comprehensive Assessment in the Primary Grades: Screening K-2 Students for Focused, Purposeful Instruction and Intervention</i>	<b>Session 54</b> General, Strand 1 <i>Herrelko, Four Steps that Help You Differentiate Your Mathematics Lesson Plans</i>	
2:00						
2:30						

11:00: Exhibit Hall Open

## Monday Summary

	150B	151A	151B	152A	152B	154AB	
<b>2:30</b>			<b>Session 66</b> General, Strand 7 <i>Burgess, Supporting Teacher Leaders as They Engage Their Colleagues in the Lesson Study Process</i>			<b>Session 70</b> Secondary (9–12), Strand 5 <i>Butler, Six of the Best: Favorite Technology Skills that Teachers Love Learning About</i>	<b>Exhibit Hall Open</b>
<b>2:45</b>	<b>Session 75</b> General, Strand 3 <i>Mark, Zeringue, Schwinden, Leading Curriculum Selection as an Opportunity for Improving Mathematics Learning</i>	<b>Session 76</b> General, Strand 6 <i>Drickey, Research on Professional Development Practices Outside of the U.S.: What Can We Learn from Others?</i>		<b>Session 77</b> General, Strand 1 <i>Barnes, Vohrer, Of PRIME Concern: Unpacking the Equity Principle</i>	<b>Session 78</b> General, Strand 6 <i>Reed, Goldsmith, What do Principals Need to Know to Support NSF-Funded Mathematics Curricula?</i>		
<b>3:45</b>							
<b>4:00</b>	<b>Session 88</b> General, Strand 4 <i>Fossum, Mooney, Schefelker, From Compliance to Commitment: Implementing a District-Wide Portfolio Initiative</i>	<b>Session 89</b> General, Strand 3 <i>Watson, Digging Deeper for Systemic Alignment and Improved Mathematics Instruction</i>		<b>Session 92</b> Secondary (9–12), Strand 5 <i>Austin, Leading the Way in Implementing Technology in Mathematics Education: Introduction to Teaching with the TI-Nspire Handhelds</i>	<b>Session 90</b> Intermediate (3–5), Strand 2 <i>Collins, How Urban Districts Have Achieved Sustainability in Improving Mathematics Teaching and Learning</i>		
<b>4:30</b>							
<b>5:00</b>							
<b>5:15–6:45:</b> Session 95, NCSM Regional Leadership Team Meeting (by invitation only), 151B							



## Monday Sessions by Strand

<b>Strand 1. Equity Leadership</b>		
Session	Room	Time
8	144BC	9:30–10:30
19	140AB	9:30–11:30
26	150B	10:45–11:45
31	144A	10:45–11:45
39	151B	12:00–2:00
47	143AB	12:15–1:15
50	151A	12:15–1:15
54	152B	1:30–2:30
69	145A	2:30–4:30
74	150A	2:45–3:45
77	152A	2:45–3:45
85	143C	4:00–5:00
87	150A	4:00–5:00

<b>Strand 2. Teaching and Learning Leadership</b>		
Session	Room	Time
9	152A	9:30–10:30
11	150A	9:30–10:30
17	151B	9:30–11:30
18	154AB	9:30–11:30
24	145A	10:45–11:45
25	150A	10:45–11:45
37	145B	12:00–2:00
38	149AB	12:00–2:00
42	143C	12:15–1:15
43	144BC	12:15–1:15
46	150B	12:15–1:15
57	143C	1:30–2:30
60	144BC	1:30–2:30
62	144A	1:30–2:30
86	144BC	4:00–5:00
90	152B	4:00–5:00
91	144A	4:00–5:00

<b>Strand 3. Curriculum Leadership</b>		
Session	Room	Time
30	152B	10:45–11:45
36	145A	12:00–2:00
40	154AB	12:00–2:00
48	152A	12:15–1:15
56	143AB	1:30–2:30
73	143C	2:45–3:45
75	150B	2:45–3:45
79	144A	2:45–3:45
84	143AB	4:00–5:00
89	151A	4:00–5:00

<b>Strand 4. Assessment Leadership</b>		
Session	Room	Time
7	144A	9:30–10:30
10	151A	9:30–10:30
29	143AB	10:45–11:45
45	152B	12:15–1:15
55	152A	1:30–2:30
65	149AB	2:30–4:30
88	150B	4:00–5:00

<b>Strand 5. Technology Leadership</b>		
Session	Room	Time
13	150B	9:30–10:30
70	154AB	2:30–4:30
80	150A	2:45–3:45
92	152A	4:00–5:00

<b>Strand 6. Leadership Connecting Research &amp; Practice</b>		
Session	Room	Time
5	143AB	9:30–10:30
58	150A	1:30–2:30
68	140AB	2:30–4:30
76	151A	2:45–3:45
78	152B	2:45–3:45

<b>Strand 7. Leading with Professional Learning</b>		
Session	Room	Time
6	143C	9:30–10:30
12	152B	9:30–10:30
16	149AB	9:30–11:30
20	145B	9:30–11:30
22	143C	10:45–11:45
23	144BC	10:45–11:45
27	151A	10:45–11:45
28	152A	10:45–11:45
35	140AB	12:00–2:00
44	150A	12:15–1:15
49	144A	12:15–1:15
59	151A	1:30–2:30
61	150B	1:30–2:30
66	151B	2:30–4:30
67	145B	2:30–4:30
72	143AB	2:45–3:45

Attend your Regional Caucus Session. See page 58.

Support the Iris Carl Mathematics Leadership Fund. See page 51.

## Monday Hot Coffee and Tea

### Compliments of Kaplan K12 Learning Services

7:00– 7:30 AM

146 ABC Concourse

(ticket not required)

Kaplan K12 Learning Services partners with schools and districts to measurably propel student achievement. Each year districts from across the country engage Kaplan K12 in a collaborative effort to support their students through programs that help build mathematics proficiency, increase reading success, meet and exceed state standards, improve college admission rates, and amplify teaching and learning.

Visit Kaplan K12 Learning Services at Booth # 1 in Hall B or at [www.KaplanK12.com](http://www.KaplanK12.com)

## Opening Session (7:30–8:00)

### Session 1

146 ABC

#### Welcome to the 41st NCSM Annual Conference!

**Steve Robinson**, Special Advisor to the Secretary, U.S. Department of Education



Steve Robinson recently joined the Department of Education as a Special Advisor to Secretary Arne Duncan. Prior to joining the Department, Robinson served as the Legislative Assistant for education in the office of then-Senator Barack Obama, advised on policy development during the

presidential campaign, and worked on education issues with the Obama-Biden Presidential Transition Team.

Steve first joined the office of Senator Obama in July 2005, supported as a fellow through the Albert Einstein Distinguished Educator Fellowship Program. During his time as a Senate staffer, he also served as a mentor for students in DCPS, as a reading tutor for elementary grade students and as a math tutor with middle school students.

Prior to joining Senator Obama's office, Steve was a high school science teacher in Eugene, Oregon. He grew up in the suburbs of Chicago, earned a degree in Biology at Princeton University, and then a Ph.D. at University of Michigan. On the Biology faculty at the University of Mass., he headed a laboratory and mentored PhD students.

NCSM President Timothy D. Kanold will provide a brief insight into the PRIME Leadership Framework and how it may be implemented by leaders in mathematics education. Executive Director Terri K. Belcher will showcase NCSM's new Web presence. Program Chair Susan Beal will provide an introduction to the Conference program.



**Timothy D. Kanold**  
NCSM President



**Terri K. Belcher**  
NCSM Executive Director



**Susan Beal**  
NCSM First Vice President and Program Chair

## Keynote Address (8:00–9:00)

### Session 2

146 ABC

#### Improving Achievement and Closing the Gaps Between Groups: Lessons from Schools and Districts on the Performance Frontier

An overview of achievement trends at the national and state levels will focus particular attention on mathematics, and on opportunity and achievement gaps that separate different groups of students. Lessons from schools and districts that are tackling those problems head on and getting better results will be shared.

**Kati Haycock**, President, The Education Trust, Washington, DC

*Presider:* Susan Beal, NCSM Program Chair, Chicago, IL



**Kati Haycock** is one of the nation's leading child advocates in the field of Education. She currently serves as President of The Education Trust. Established in 1990, the Trust does what no other Washington-based education organization seeks to do: speaks up for what's right for young people,

especially those who are poor or members of minority groups. The Trust also provides hands-on assistance to urban school districts and universities that want to work together to improve student achievement, kindergarten through college.

Before coming to The Education Trust, Haycock served as Executive Vice President of the Children's Defense Fund, the nation's largest child advocacy organization. A native Californian, Haycock founded and served as President of The Achievement Council, a statewide organization that provides assistance to teachers and principals in predominantly minority schools in improving student achievement. Before that, she served as Director of the Outreach and Student Affirmative Action programs for the nine-campus University of California system.

Turn in event admission tickets you do not plan to use at the Registration Desk or near room 151.

## Monday 9:30–10:30

### Session 3: Major Session

Secondary (9–12)

146ABC

#### Four Years From First-Year Algebra to Calculus Is Not Enough

Many of our best students take algebra in eighth grade and calculus in 12th grade. Because of their success, we expect other students to go from algebra to calculus in four years. I argue that this is an unrealistic expectation with a rich standards-based curriculum.

**Zalman Usiskin**, The University of Chicago, Chicago, IL

*Presider:* Steve Viktora, NCSM Central Region 1 Director, Winnetka, IL



**Zalman Usiskin** is professor emeritus of education at the University of Chicago, where he was a faculty member from 1969 through 2007. He remains the overall director of the University of Chicago School Mathematics Project (UCSMP), a position he has held since 1987.

His research has focused on the teaching and learning of arithmetic, algebra, and geometry. Usiskin has authored or co-authored over 150 articles and other papers on mathematics and mathematics education, dozens of books and book-length research monographs, including textbooks for each of grades 6 through 12. In developing these books, he has taught mathematics in nine different secondary schools.

Usiskin served as Vice-President of NCSM (1983-1984). He received the Glenn Gilbert National Leadership Award from NCSM in 1994 and a Lifetime Achievement Award from NCTM in 2001.

### Session 4

General

First Timer's Session

145A

#### What's It All About? An Orientation for Those New to the NCSM Annual Conference

This session is for those who are new to NCSM Conferencing. Participants will network with others, overview the structure of the conference, explore the different conference options, set personal priorities and goals, and work on a personal plan of what to do and where to go during the sessions.

**Janie Zimmer**, Research-Based Education, Reading, PA

Submit articles for the NCSM Newsletter. See page 87.

### Session 5

General

Strand 6

143AB

#### The Impact of Elementary Mathematics Coaches on Student Achievement and Teachers

A three-year, randomized control study examined the impact of elementary mathematics coaches on student achievement, teacher beliefs, and teacher involvement in professional development. This session will share findings, including impact on student achievement at the school and classroom levels. The work coaches engaged in and policy implications will be discussed.

**Patricia Campbell**, University of Maryland, College Park, MD

**Nathaniel Malkus**, University of Maryland, College Park, MD

### Session 6

General

Strand 7

143C

#### Partners for Mathematics Learning

Partners, a professional development model, is a statewide MSP project involving a cadre of educators who came together from different projects to become a "community of leaders." Teachers, in almost half of North Carolina's school districts, will benefit from multiple days of professional development created and delivered through the project.

**Jeanne Joyner**, Meredith College, Raleigh, NC

**Katherine Mawhinney**, Appalachian State University, Boone, NC

**Everly Broadway**, North Carolina Department of Public Instruction, Raleigh, NC

### Session 7

General

Strand 4

144A

#### Accessibility and Assessment: What Is Universal Design and How Is It Used in Building Assessments?

What does it mean to make an assessment accessible and how is it done? This session focuses on Universal Design techniques as they apply to building and designing state and classroom mathematics assessments. Learn how assessment companies make assessments accessible, with tips you can use within your own classroom!

**Mary Lou Schmidt**, CTB/McGraw-Hill, Monterey, CA

**Teresa Hall**, CTB/McGraw-Hill, Monterey, CA

### Session 8

General

Strand 1

144BC

#### Early Algebra and Computational Fluency: How "Struggling" and "Advanced" Learners Learn about the Meaning of Operations

How does work in early algebra support computational fluency? We will present cases of teachers who engage students deeply in the meaning of operations, both supporting struggling learners and enhancing the learning of students who need additional challenge. We will describe characteristics of teacher practices that support this work.

**Susan Jo Russell**, TERC, Cambridge, MA

**Virginia Bastable**, Mt. Holyoke College, South Hadley, MA

**Deborah Schifter**, Education Development Center, Newton, MA



## Monday 9:30–11:30 (Double)

### Session 16

General Strand 7 149AB

#### Teacher Learning Through Observing Student Learning

Participate in activities designed to enhance educators' powers of observation of student learning through looking at the artifacts from a summer Learning Laboratory experience.

**Samuel Shaneyfelt**, Allegheny Intermediate Unit, Homestead, PA

**Andrea Miller**, Allegheny Intermediate Unit, Homestead, PA

### Session 17

Primary (PK–2) Strand 2 151B

#### Developing Number Sense and Mental Strategies in All Students through a Deep Understanding of Place Value

This session is designed to show the importance of developing a deep understanding of the concept of place value at an early age, if all students are to develop strong number sense and efficient mental computation strategies.

**Brian Tickle**, Mathematics Education Consultant, Taree, New South Wales, Australia

### Session 18

Primary (PK–2) Strand 2 154AB

#### Supporting the Development of Computational Fluency: Examining Classroom Practice Using Video and Cases

We will consider how to use video and cases to help teachers examine the decisions and moves they make as they work with their students on developing computational fluency.

**Arusha Hollister**, Education Research Collaborative, TERC, Cambridge, MA

**Judith Storeygard**, TERC, Cambridge, MA

**Megan Murray**, TERC, Cambridge, MA

### Session 19

Middle (6–8) Strand 1 140AB

#### A Professional Development Institute for Administrators for Improving Mathematics Learning for Students with Disabilities

Improving mathematics learning for students with disabilities requires the leadership and support of administrators including principals, mathematics leaders, and special education leaders. Learn about ways to conduct a professional development institute for administrative teams. Experience sample activities, including case discussions, video, structured planning sessions and tools for your district.

**Fred Gross**, Education Development Center, Newton, MA

### Session 20

Middle (6–8) Strand 7 145B

#### Lessons Learned: A Statewide Professional Learning Community Tackles the Problem of At-Risk Learners through Video-Based Action Research

Over the past five years, cohorts of middle and high school mathematics teachers from Delaware districts have studied strategies to promote success for students at risk of failure in secondary mathematics. In this session, with help from participants, we will present lessons learned using video vignettes and summary materials.

**Jon Manon**, University of Delaware, Newark, DE

**Janice McCarthy**, University of Delaware, Newark, DE

**Thomas Fernsler**, University of Delaware, Newark, DE

## Monday 10:45–11:45

### Session 21: Major Session

General

146ABC

#### Intensification: A Comprehensive Approach for Under-Prepared Algebra Students

**Diane J. Briars**, NCSM President-Elect, Pittsburgh, PA

One of our greatest challenges as mathematics education leaders is ensuring the success of students who enter high school behind in mathematics. This session describes a comprehensive program that strategically blends effective, existing approaches, and teaching materials with research-informed strategies to increase the performance of under-prepared ninth-grade algebra students.

*President:* Laurie Boswell, NCSM Eastern Region 1 Director, Lyndonville, VT



**Diane J. Briars**, President-Elect of NCSM, is a mathematics education consultant and Co-Director of the Algebra Intensification Project, a joint venture of the Learning Science Research Institute, University of Illinois at Chicago and the Dana Center, University of Texas at Austin.

Briars was Mathematics Director for the Pittsburgh Public Schools. Under her leadership, the Pittsburgh Schools increased student achievement through standards-based curricula, instruction, and assessment. She has served as a member of many national committees, including the National Commission on Mathematics and Science Teaching for the 21st Century, headed by Senator John Glenn, and in leadership roles for national organizations, including the National Council of Teachers of Mathematics, the College Board, and the National Science Foundation.

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## Monday 10:45-11:45 (Regular continued)

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### Session 22

**General** **Strand 7** **143C**  
**Systems-Based District Leadership Teams: Creating a Culture for Mathematics Learning**

How does a district leadership team cultivate a culture for mathematics learning? We will share a systems-based leadership model enacted in New Mexico school districts. Specifically, we will share the “nuts and bolts” of how a committed group of professionals created a mathematics program focused on student learning.

**Janice Bradley**, New Mexico State University, Las Cruces, NM  
**Cathy Kinzer**, New Mexico State University, Las Cruces, NM

### Session 23

**Secondary (9–12)** **Strand 7** **144BC**  
**Professional Learning Communities: Teachers and Administrators Working Collaboratively to Enhance Learning**

Project Directors from two West Virginia Mathematics Science Partnership Grants will share their journey in designing and implementing professional learning communities to provide professional development to enhance student learning in high-need rural schools. Participants will be actively involved as video and student work, and portfolios are integrated into the presentation.

**Judy Pomeroy**, Regional Education Service Agency IV, Summersville, WV  
**Kelly Watts**, Regional Education Service Agency II, Huntington, WV

### Session 24

**General** **Strand 2** **145A**  
**Video Study Groups: The Focus Is on Student Learning**

Video of students at work in each teacher's classroom serves as an effective way to launch professional discussions about student interactions, questions, and responses to instruction. In this session, we will share lessons learned as well as protocols and sample video from our experience as facilitators of video study groups.

**Linda Griffin**, Northwest Regional Educational Laboratory, Portland, OR  
**Lisa Lavelle**, Northwest Regional Educational Laboratory, Portland, OR

### Session 25

**General** **Strand 2** **150A**  
**Beyond the Word Wall: Using Literacy Strategies in Mathematics Instruction**

Although integrating literacy strategies into mathematics instruction facilitates student learning, mathematics teachers are often reluctant to use them. This research-based session examines the reasons for the resistance, which strategies in-service teachers are/might be more likely to use, and ways to support teachers to increase their use of literacy strategies.

**Ellen Friedland**, Buffalo State College, Buffalo, NY  
**Pixita del Prado Hill**, Buffalo State College, Buffalo, NY  
**Susan McMillen**, Buffalo State College, Buffalo, NY

### Session 26

**General** **Strand 1** **150B**  
**Leadership for Equity in Mathematics Education: Why It Matters and What to Do About It**

Why is it important to address equity in mathematics professional learning experiences for teachers and how can this be done in meaningful and productive ways? Engage in activities and strategies used successfully to promote teacher leadership and increase teachers' understanding and ability to address issues of access and equity.

**Nancy Terman**, University of California, Santa Barbara, CA  
**Maria Guzman**, Oxnard Union High School District, Oxnard, CA

### Session 27

**General** **Strand 7** **151A**  
**Essential Understandings NCTM Book Series: “Multiplication and Division, Grades 3–5,” Professional Development Tools for Engaging Teachers with Mathematics**

An NCTM content series for teachers, *Essential Understandings* focuses on grade-band-specific topics that are mathematically important, difficult to understand, and challenging to teach. This session will provide an overview of the books planned for grades 3-5, and the first book, “Multiplication and Division,” will be discussed.

**Edward Rathmell**, University of Northern Iowa, Cedar Falls, IA  
**Al Otto**, Retired, Ellisville, MO  
**Cheryl Lubinski**, Maplewood Richmond Heights School District, Richmond Heights, MO

### Session 28

**General** **Strand 7** **152A**  
**Partnering with School Principals to Improve Mathematics Instruction**

This session is for those who partner with school principals to lead and improve their school's mathematics program. Strategies and perspectives collected from experienced mathematics coaches, teacher leaders, and principals are used as contexts for participants to examine their role to support, educate, and collaborate with their principals.

**Carolyn Felux**, Math Solutions, Sausalito, CA

### Session 29

**Intermediate (3–5)** **Strand 4** **143AB**  
**Using Data Analysis to Support Conceptual Instruction and Improve Mathematics Scores on High Stakes Assessments**

School leaders must balance how much classroom time is given to improving standardized test scores while still maintaining the integrity of conceptual instruction. Participants will learn how an elementary mathematics administrator and an elementary mathematics district coordinator in Westport, Connecticut, addressed this challenge.

**Anne Nesbitt**, Westport Board of Education, Westport, CT  
**Elizabeth Messler**, Westport Board of Education, Westport, CT

## Monday 10:45-11:45 (Regular continued)

### Session 30

Intermediate (3–5) Strand 3 152B

#### Professional Development Strategies to Promote Change in the Teaching of Computation

This session will describe methods that have been used in other parts of the world to change the teaching of computation to focus on mental strategies before the development of paper and pencil methods. The speaker will focus on methods used in Australia.

**James Burnett**, ORIGO Education, Queensland, Australia

### Session 31

Middle (6–8) Strand 1 144A

#### Meeting the Needs of English Language Learners: What Mathematics Teachers Need to Know

Abundant folk wisdom informs the ways mathematics educators work with—or don't work with—English Language Learners in their middle school mathematics classrooms. With an explicit focus on social justice research, this session will highlight ways to help mathematics educators identify and remedy the myths that influence our professional practice.

**Anita Bright**, Fairfax County Public Schools, Falls Church, VA

### Session 32: CASIO Sponsor Showcase

#### General

147A

#### Theory to Practice—A Supervisor's Mathematical Dream Come True

**James “Mitch” Mitchell**, CASIO America, Dover, NJ Assistant Principals for Instruction/Supervision, who also teach one class of mathematics, present strategies from theory to practice highlighting New York City Schools and their technology integration for high school mathematics (perspectives include pedagogy, effectiveness, technology transition, performance, usability, integration, and budgetary constraints). Door prizes will be given.

### Session 33: Pearson Technology Showcase

#### General

147B

#### Integrating Technology into Mathematics Instruction to Measurably Improve Student Achievement

**Mark Jamison**, Pearson, Grapevine, TX

**Debbie Crawford**, Pearson, Greenville, SC

How can schools effectively integrate technology into mathematics instruction to improve teacher effectiveness and student achievement? Learn practical strategies to help teachers integrate notebook computers, online instructional resources, assessment tools, and other technologies into daily teaching and learning to address state standards, engage students, and promote higher order thinking skills.



Nominations for 2010 NCSM Board positions are open. See page 84.

## Monday Box Lunch

### Session 34

Sponsored by Didax

Hall B

11:30 AM – 12:45 PM (ticket required)

12:45 PM – 1:00 PM (wait-list ticket required)

The name Didax comes from the Greek *didaktikos*, meaning “to teach.” For over thirty years, Didax has specialized in helping educators to address individual learning styles and diverse student needs. Tested by teachers, parents, and children each of their products is designed to meet a distinct educational need.

Visit Didax at Booth # 19 in Hall B or at [www.didax.com](http://www.didax.com).

## Monday 12:00–2:00 (Double)

### Session 35

General Strand 7 140AB

#### **Professional Development Practices that Support the Development of Teachers' Mathematical Knowledge for Teaching**

Participants will consider a set of practices for purposeful orchestration of mathematical work in professional development. Video of teachers doing mathematics in professional development will be used as a tool to discuss how leaders might cultivate mathematically rich environments for teachers.

**Judith Mumme**, WestEd, Sheridan, MT  
**Cathy Carroll**, WestEd, Redwood City, CA

### Session 36

General Strand 3 145A

#### **Understanding Curriculum Coherence, Why it is Important, and Tools for Helping Districts Achieve It**

National and international studies highlight the lack of coherence in the United States K-12 curricula. What contributes to this incoherence? What is a coherent curriculum? The session will consider strategies and share tools to help district teams analyze their intended, implemented, and achieved curriculum to improve learning for all students.

**Mary Bouck**, Michigan State University, East Lansing, MI  
**Gail Burrill**, Michigan State University, East Lansing, MI

### Session 37

General Strand 2 145B

#### **Partnerships that Work: Inclusion and Collaborative Team Teaching for Student Achievement**

With the rise of inclusion in teaching students with special needs, more teachers are finding themselves in collaborative team teaching relationships. As team teachers of secondary mathematics in high needs schools, we will introduce and model strategies for creating effective long-term partnerships to increase achievement for all students.

**Cristina Jacobs**, NYC Department of Education, Brooklyn, NY  
**Katherine Williams**, Kurt Hahn School, Brooklyn, NY

### Session 38

General Strand 2 149AB

#### **Supporting Teachers as They Use Effective Questioning Techniques to Engage All Learners**

What support structure is needed to help teachers engage all learners in the questioning and thinking process? Goal setting, lesson observation, collaboration, data-gathering techniques, and protocols will be shared during this interactive session. A video will be shown of how one teacher uses alternative response to engage all learners.

**Lori Gibson**, Bismarck Public Schools/Dickinson State University, Bismarck, ND

**Mary McHugh**, Wachter Middle School, Bismarck, ND

**Kimberly Breitbach**, Bismarck Public Schools, Bismarck, ND

### Session 39

General Strand 1 151B

#### **Ethnomathematics Solutions to Equity: North American Study Group of Ethnomathematics (NASGEm) Panel**

Fredrick Silverman will introduce supervisors in Ethnomathematics, with leadership in research, programs, ideas, and/or strategies help schools provide access and equity for all student. Their initiatives impact assessment, linguistic diversity, teaching strategies, professional development, mathematics content, and classroom management. Discussion follows on programs, strategies, and materials increasing achievement in NCLB (No Child Left Behind).

**Claudette Engblom-Bradley**, Mathematical Visions, Anchorage, AK

**Jim Barta**, Utah State University, Logan, UT

**Frederick Silverman**, University of Northern Colorado, Greeley, CO

### Session 40

General Strand 3 154AB

#### **Engaging Parents in Mathematical Thinking: Parent Workshops to Support Successful District-Wide Curriculum Implementation**

Successful implementation of a K-5 mathematics curriculum requires parent understanding of its pedagogy and mathematical ideas. In this session, district, school, and family leaders share the structure of workshops designed to inform parents, deepen their understanding of elementary mathematics, and provide them with tools to support student learning.

**Nancy Horowitz**, Cambridge Public Schools, Holyoke, MA  
**Frederick Park**, Cambridge Public Schools, Cambridge, MA  
**Shirley Harvey**, Cambridgeport School, Cambridge, MA



Complete the Conference Feedback Survey and turn it in at the Registration Desk or at the Wednesday luncheon.



## Monday 12:15–1:15

### Session 41: Major Session

General

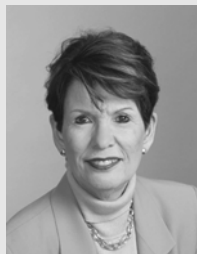
146ABC

#### Proportional Reasoning and Success with Algebra: The Incredible Hulk and The Shrunken Kids

**Carole Greenes**, NCSM Past President, Arizona State University, Mesa, AZ

Proportional reasoning is fundamental to the successful study of algebra. There are numerous applications in the curriculum, beginning in Kindergarten, that are rich for development of this reasoning method. Understanding proportional reasoning and its applications, teachers will be better able to prepare students for algebra.

*Presider:* Donna Karsten, NCSM Canadian Region Director, Halifax, Nova Scotia, Canada



**Carole Greenes** is Dean of the School of Educational Innovation and Teacher Preparation, Director of the Center for the Practice, Research and Innovation in Mathematics Education, Professor of Mathematics Education at Arizona State University, and Principal Investigator of the NSF-funded

“Prime the Pipeline Project (2008–2011).”

She is author or co-author of more than 300 books, programs, articles, and games focusing on problem solving, algebraic reasoning, the mathematical education of students, Pre-Kindergarten through Grade 12, and the updating of teachers.

Greenes is Past President of the National Council of Supervisors of Mathematics (2001–2003), a member of the Steering Committee for the NCTM Navigations Series, editor of the 5-monograph series for NCSM, editor of the NCTM 2007 Yearbook on *Algebra and Algebraic Thinking*, and a frequent speaker at national and international meetings of mathematicians and mathematics educators.

### Session 42

General

Strand 2

143C

#### Building Instructional Capacity: Mathematics Coaching in Aurora Public Schools

Aurora Public Schools has been building a district-wide mathematics coaching model for more than six years. This session will provide an overview of the history, structures, successes, student results, and challenges of mathematics coaching in an urban school district.

**Rachael Risley**, Aurora Public Schools, Aurora, CO

**Jim Hogan**, Aurora Public Schools, Aurora, CO

### Session 43

General

Strand 2

144BC

#### Knowing and Modeling PRIME Teaching and Learning Leadership!

This interactive session will provide the opportunity to develop understanding of the Teaching and Learning Principle leadership actions as described in PRIME. Participants will use self assessment tools to connect the Teaching and Learning Leadership actions into the context of their workplace. PRIME Teaching and Learning Toolkit materials will be provided.

**Laurie Boswell**, NCSM Regional Director E1, Monroe, NH

**Suzanne Mitchell**, NCSM Regional Director S2, Jacksonville, AR

### Session 44

General

Strand 7

150A

#### Essential Understandings Book Series: “Professional Development Tools for Engaging Teachers with Mathematics, Grades 6–8”

An NCTM content series for teachers, *Essential Understandings* focuses on grade-band-specific topics that are mathematically important, difficult to understand, and challenging to teach. This session will provide an overview of the books planned for grades 6–8, and will discuss the first book in the series, “Ratio and Proportionality.”

**Randall Charles**, San Jose State University, San Jose, CA

**Joanne Lobato**, San Diego State University, San Diego, CA

### Session 45

General

Strand 4

152B

#### Lessons from the Field: Evaluating Large-Scale Assessments

The NCTM website has a tool for evaluating large-scale assessments. We will invite several guests who have used the tool for different purposes to join us in small group discussions and share what they have learned. Participants will be encouraged to plan how they could use the tool in their setting.

**Linda Wilson**, American Association for the Advancement of Science, Washington, DC

**Kay Gilliland**, Self-Employed, NCSM Past President, Oakland, CA

**Michael Brown**, Self-Employed, San Antonio, TX

**Cathy Brown**, Teachers Inspiring Problem Solvers, Redmond, OR

### Session 46

Intermediate (3–5)

Strand 2

150B

#### Priming Principals as Partners: Using Mathematical Vocabulary as the Pump

From the perspective of former teacher, mathematics specialist, and now principal, session goals include outlining strategies to engage principals to support explicit use of vocabulary by identifying: “math power” words and ways to insure their meaningful use; how vocabulary can be a bridge rather than a barrier to conceptual understanding.

**Christine Moynihan**, Newton Public Schools, Newton, MA

## Monday 12:15-1:15 (Regular continued)

### Session 47

Middle (6–8) Strand 1 143AB

#### High Standards for Middle Students with Mathematics Difficulties

This session will review recently conducted research on at-risk students and students with learning disabilities in standards-based classrooms in the intermediate and middle grades. The presenter will discuss the importance of curriculum modifications and instructional strategies, as well as specific discourse practices that support higher achievement and increased student participation.

**John Woodward**, University of Puget Sound, Tacoma, WA

### Session 48

Middle (6–8) Strand 3 152A

#### Adding Depth and Complexity to the Middle Grades Mathematics Curriculum

This session will focus on techniques for challenging advanced students while engaging students with diverse backgrounds. Participants will be actively involved in using proven teaching, learning, and questioning strategies to add depth and complexity to problems to enrich top students while giving access to important mathematics to all students.

**Linda Sheffield**, Northern Kentucky University – Emeritus, Highland Heights, KY

### Session 49

Secondary (9–12) Strand 7 144A

#### Communities of Practice to Press Content Knowledge for Teaching Mathematics

This session reports on a mathematics professional development project that reframes an educational system to move beyond district-wide initiatives that are only moderately effective at initiating change to a concerted, district-wide effort to rethink and restructure high school mathematics classrooms, and the roles of teachers and administrators.

**Michael Gilbert**, University of Hawaii, Honolulu, HI  
**Barbara Gilbert**, University of Hawaii, Honolulu, HI

### Session 50

Secondary (9–12) Strand 1 151A

#### Too Little, Too Late? One District's Approach to the Promise and Challenges of High School Mathematics ELLs

English Language Learners in high school present unique challenges. The session will discuss one district's implementation of five strategies to increase mathematics achievement for these students: create benchmark assessments, utilize specific software applications, provide teachers with professional development activities, revise curriculum, and give course scheduling priority to ELLs.

**Warren Roane**, Humble Independent School District, Kingwood, TX

## Session 51: CORD Communications Sponsor Showcase

General 147A

### Mathematics in Context—Pedagogy and Materials for Greater Secondary-Level Mathematics Success

**Claudia Maness**, CORD Communications, Texarkana, AR

Contextual-based teaching is a proven method for enabling a majority of students, the concrete learners, to be successful in high school mathematics. A leading mathematics educator will share with participants the materials and methods used to enable teachers to be better contextual teachers and how it benefits learners of all styles.

## Session 52: Carnegie Learning Technology Showcase

General 147B

### Carnegie Learning Adaptive Math Solutions—Flexible, Research-Based Mathematics Solutions for All Middle and High School Students

**Sandy Bartle**, Carnegie Learning, Inc., Pittsburgh, PA  
**Amy Lewis**, Carnegie Learning, Inc., Pittsburgh, PA

In this hands-on session, participants will experience mathematics instruction that meets individual student needs. Whether you are searching for a core program or a supplemental solution, Cognitive Tutor© Software offers rich problem solving activities, dynamic formative assessment, and detailed student reports. By Learning by Doing™, students become engaged in the mathematics.

Student Recognition Certificates are available at the Registration Desk.

Submit a speaker proposal form (available at [mathedleadership.org](http://mathedleadership.org)) for the 2010 NCSM Annual Conference in San Diego. See page 84.

## Monday 1:30–2:30

### Session 53: Major Session

General

146ABC

#### Guaranteeing Improved Classroom Teaching in 20 Years: What Should We Do Tomorrow?

**James Hiebert**, University of Delaware, Newark, DE

During the past 100 years, the United States has experienced wave after wave of educational reform with few changes in classroom practice. To ensure we are working toward lasting improvements in teaching, improvements that will increase students' learning, where should we start? What will this path to improvement look like?

*Presider:* Suzanne Mitchell, NCSM Souther Region 2 Director, State University, AR



**James Hiebert** is the Robert J. Barkley Professor of Education at the University of Delaware, where he teaches in programs of teacher preparation, professional development, and doctoral studies. He is a Principal Investigator on the NSF-funded Mid-Atlantic Center for Teaching and Learning Mathematics.

Hiebert's professional interests focus on mathematics teaching and learning in classrooms. He has co-authored several books about teaching and learning mathematics and improving classroom education. He served as the director of the mathematics portion of the 1999 TIMSS Video Study.

### Session 54

General

Strand 1

152B

#### Four Steps that Help You Differentiate Your Mathematics Lesson Plans

Learn about and try out a teacher-tested four-step method for lesson preparation that addresses the multiple learners in your classrooms. The four-step method helps teachers plan, prepare, and assess student learning, meeting the multiple learning needs of students and mathematics standards that teachers face daily.

**Janet Herrelko**, University of Dayton, Dayton, OH

Turn cell phones off or put on vibrate while in sessions.

Complete the Conference Feedback Survey and turn it in at the Registration Desk or at the Wednesday luncheon.

### Session 55

Primary (PK–2)

Strand 4

152A

#### Comprehensive Assessment in the Primary Grades: Screening K-2 Students for Focused, Purposeful Instruction and Intervention

This session will provide an example of a Primary Math Screen Assessment that has been successfully administered at the K-2 level to establish instructional focus and purposeful interventions. Learn how the Math Screen impacts teacher understanding, accountability, and professional learning communities. Video samples will be used to highlight the process.

**Jim Pfeiffer**, Deer Valley Unified School District, Glendale, AZ  
**Christine Kelly**, Clover Park School District, Lakewood, WA

### Session 56

Intermediate (3–5)

Strand 3

143AB

#### Math Foundations: Focused Intervention for Long-Term Student Success

Today's mathematics curricula are comprehensive and fast-paced. In the practical life of the classroom, this often means that some students fall behind. Come learn how an innovative intervention program, Math Foundations, targets foundational concepts and provides relevant and meaningful mathematics for all. Our school's test scores soared. Yours can, too.

**Keith Jones**, Montgomery County Public Schools, Gaithersburg, MD

**Robyn Silbey**, Montgomery County Public Schools, Gaithersburg, MD

**Michelle Powell**, Montgomery County Public Schools, Gaithersburg, MD

**Catherine Stephens**, Montgomery County Public Schools, Gaithersburg, MD

### Session 57

Intermediate (3–5)

Strand 2

143C

#### Inquiry Groups: Leading Elementary Teachers and Children to See Mathematics as Thinking!

Informal professional development sessions can encourage elementary teachers to open their instructional strategies in ways that encourage students to think mathematics rather than just memorize rules. Teachers also are encouraged to think mathematics and put aside their insecurity.

**Tom Rowan**, NCSM Past President, Independent Consultant, Columbia, MD

### Session 58

Intermediate (3–5)

Strand 6

150A

#### Teaching and Learning Basic Facts Using Online Tools

Educators agree that students should develop automaticity with their mathematics facts. Learn what we can do when students are struggling to learn their basic facts; identify prerequisite knowledge that might be lacking for these students; and discover how these findings have been incorporated into the First Math On-line Program.

**Lynn Columba**, Lehigh University, Bethlehem, PA

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**Monday 1:30-2:30 (Regular continued)**

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**Session 59****Middle (6–8)****Strand 7****151A****Making Connections—A Mathematics Transitions Project**

Student transitions from middle school to high school can present challenges in mathematics. In the Halton Board, lesson study projects have provided teachers with the opportunity to plan collaborative lessons and make connections across the grades. Teachers developed content continuums and critical pedagogy skills through analysis of their own classroom practice.

**Amy Lin**, Halton District School Board, Burlington, Ontario, Canada

**Ruth Teszeri**, Halton District School Board, Burlington, Ontario, Canada

**Session 60****General****Strand 2****144BC****Resources and Strategies for Building a Strong Mathematical Focus into the Lesson Study Practice of New and Experienced Teams**

What guiding questions, activities, and coaching strategies raise lesson study from a simple set of steps (set goals, plan lesson, teach, reflect) to true lesson research? Explore new resources for leaders that focus lesson study on revealing students' mathematical thinking and on developing teacher knowledge of mathematics and pedagogy.

**Jane Gorman**, Education Development Center, Newton, MA

**Johannah Nikula**, Education Development Center, Newton, MA

**Session 61****Secondary (9–12)****Strand 7****150B****Essential Understandings Book Series: "Professional Development Tools for Engaging Teachers with Mathematics, Grades 9–12"**

An NCTM content series for teachers, *Essential Understandings*, focuses on grade-band specific topics that are mathematically important, difficult to understand, and challenging to teach. This session will provide an overview of the books planned for grades 9–12, and the first book in the series, "Functions," will be discussed.

**Patricia Wilson**, University of Georgia, Athens, GA

**Gwen Lloyd**, Virginia Polytechnic Institute and State University, Blacksburg, VA

**Sybilla Beckmann**, University of Georgia, Athens, GA

**Thomas Cooney**, University of Georgia, Athens, GA

**Session 62****College****Strand 2****144A****Supervision of Student Teachers using PRIME Standards**

Student teaching is a critical component to prepare candidates for teaching mathematics. Leadership is essential to their development. PRIME standards can help cooperating teachers, supervisors, and educators. Speakers will briefly share the elements, challenges, and successes. We will continue with participant discussion focused on key components of student teaching.

**Connie Schrock**, NCSM Central Region 2 Director, Emporia State University, Emporia, KS

**Kay Gilliland**, NCSM Past President, Mills College, Oakland, CA

**Session 63: Texas Instruments Sponsor Showcase****General****147A****Use the TI-Nspire to Engage Students and Explore Multiple Representations of Algebraic and Geometric Concepts**

**Betty Gasque**, Texas Instruments, Dallas, TX

Using the linked multiple representations (graphs, geometric constructions, and spreadsheets) of the TI-Nspire, students can explore rich application problems that connect algebra and geometry. Participants will construct TI-Nspire documents based on ancient optimization problems that will help students develop algebraic and geometric concepts. This session is appropriate for new users.

**Session 64: Key Curriculum Press Technology Showcase****General****147B****A Sneak-Preview of Sketchpad Version 5**

**Nicholas Jackiw**, Key Curriculum Press Technologies, Emeryville, CA

Try the latest version of this award-winning software, used across grade levels and around the world, to help students develop powerful mathematical understanding through dynamic, interactive visualization. This version integrates with your digital classroom, adding power and convenience, extending applications across curriculum topics. Learn what's new from Sketchpad's designer and developer.



## Monday 2:45–3:45

### Session 71: Major Session

General

146ABC

#### Addressing Challenges in Designing and Implementing Teacher Professional Development Programs: Drawing on the Evidence

**Iris R. Weiss**, President of Horizon Research, Inc. Chapel Hill, NC

**Daniel J. Heck**, Senior Research Associate, Horizon Research, Inc., Chapel Hill, NC

Despite growing knowledge about effective mathematics teacher professional development, it remains challenging to enact programs in many school and district contexts that draw on this knowledge base. This session will provide practical advice for enacting professional development programs that build on what we know from theory, research, and practice.

*Presider:* Linda Gojak, NCSM Past President, University Heights, OH



**Iris R. Weiss** is President of Horizon Research, Inc., (HRI), a contract research firm in Chapel Hill, NC, specializing in science and mathematics education research and evaluation and has directed many of the research, development, and evaluation projects at HRI. She is currently Principal Investigator

of a knowledge management and dissemination project for the NSF's Math and Science Partnership program. She has provided consultation to many national departments and organizations, including the NSF, U.S. Department of Education, American Association for the Advancement of Science, National Science Teachers Association, National Council of Teachers of Mathematics, and National Assessment of Educational Progress. Weiss has directed several national surveys of science and mathematics teachers, as well as the Inside the Classroom national observation study. She has also conducted evaluation of a wide variety of mathematics/science professional development and systemic reform projects, including the Local Systemic Change Initiative.



**Daniel J. Heck** is a Senior Research Associate at Horizon Research, Inc. and is a senior staff member on the Math and Science Partnership Knowledge Management and Dissemination and Center for the Study of Mathematics Curriculum projects. He is Co-Principal Investigator of the Fostering

Mathematics Success for English Language Learners project, and leads the evaluations of many of the projects at HRI. Heck has directed the Study of the Impact of the Statewide Systemic Initiatives, Lessons Learned from Research on Systemic Reform projects, and the

evaluations of Indiana University's Indiana Mathematics Initiative Partnership and the Center for Curriculum Materials in Science. He also provided leadership in mathematics education on the Inside the Classroom project, and on longitudinal and large-scale quantitative analyses for the Core Evaluation of the Local Systemic Change through Teacher Enhancement.

### Session 72

General

Strand 7

143AB

#### Designing a New Teacher Induction Program for Mathematics Teachers

Learn how one district uses a three-day summer academy, after-school study sessions, and one-on-one coaching to assist in the induction of new mathematics teachers. The session will focus on how each part of the induction program operates and functions to meet the needs of new mathematics teachers.

**James Paschal**, Knox County Schools, Knoxville, TN

### Session 73

General

Strand 3

143C

#### Enacting New Mandatory State Guidelines for K-12 Mathematics by Connecting Curriculum, Instruction, Assessment, Research, and Professional Learning

As of May 2008, Iowa has new first-ever mandatory state guidelines for K-12 mathematics, which are being implemented through professional learning that connects curriculum, instruction, and assessment, based on research. We will discuss the state initiative, with examples and experiences, and report on progress in this new state adventure.

**Eric Hart**, Maharishi University of Management, Fairfield, IA  
**Judith Spitzli**, Iowa Department of Education, Des Moines, IA

### Session 74

General

Strand 1

150A

#### Knowing and Modeling PRIME Equity Leadership!

This interactive session will provide participants with the opportunity to develop understanding of the Equity Principle leadership actions as described in PRIME. Participants will spend time using self-assessment tools to connect the Equity actions into the context of their workplace. The latest PRIME Equity Toolkit materials will also be provided.

**Linda Fulmore**, NCSM Second Vice President, Cave Creek, AZ

**Timothy Kanold**, NCSM President, Chicago, IL

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## Monday 2:45-3:45 (Regular continued)

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### Session 75

General Strand 3 150B

#### Leading Curriculum Selection as an Opportunity for Improving Mathematics Learning

Curriculum leaders face many decisions when facilitating the selection process of mathematics instructional materials. In this session, we will share findings from an NSF-funded study that reports on the mathematics adoption experiences of curriculum leaders across the country, including their role in the selection process and factors affecting selection.

**June Mark**, Education Development Center, Newton, MA  
**Julie Zeringue**, Education Development Center, Newton, MA  
**Katherine Schwinden**, Education Development Center, Newton, MA

### Session 76

General Strand 6 151A

#### Research on Professional Development Practices Outside of the U.S.: What Can We Learn from Others?

According to the NCSM PRIME Leadership Framework, leaders should engage teachers in collaborative dialogue about research-informed instructional practices. During this session, participants will learn about research conducted in India, Japan, and China about professional development practices. Leaders will have an opportunity to connect the research to their own context.

**Nancy Drickey**, Linfield College, McMinnville, OR

### Session 77

General Strand 1 152A

#### Of PRIME Concern: Unpacking the Equity Principle

In this collaborative session, participants will examine the Equity Principle of the PRIME Leadership Framework. Participants will share ideas and develop strategies for advancing the equity discussion in their district.

**Bill Barnes**, Howard County Public School System, Ellicott City, MD  
**Susan Vohrer**, Baltimore County Public Schools, Baltimore, MD

### Session 78

General Strand 6 152B

#### What do Principals Need to Know to Support NSF-Funded Mathematics Curricula?

We will share findings from a survey of 500 K-8 principals showing whether their leadership content knowledge for mathematics is aligned to their school's mathematics curriculum. We will look at two case study schools where the principals' beliefs about mathematics teaching and learning are aligned and two where they are not.

**Kristen Reed**, Education Development Center, Newton, MA  
**Lynn Goldsmith**, Education Development Center, Newton, MA

### Session 79

Intermediate (3–5) Strand 3 144A

#### Integration of Mathematics, Science, and Literacy

In New York City we are developing strategies that would integrate our science, math, and literacy curricula. During this interactive workshop participants will have an opportunity to experience this process. We will share our strategies, and we will analyze the role notebooks play in deepening conceptual understanding of our students.

**Sandra Jenoure**, New York City Department of Education, New York, NY  
**Elizabeth Emond**, New York City Department of Education, New York, NY

### Session 80

Secondary (9–12) Strand 5 150A

#### Using a Computer Algebra System to Provide Equal Access to Algebra for All Students

Faced with a school district mandate to have all high school students complete an algebra curriculum, a group of high school teachers decided to have their under-performing students use a Computer Algebra System in their pre-algebra and algebra classes. Hear about their journey and the dramatic impact on student attitude.

**Larry Osthus**, Independent Mathematics Consultant, Des Moines, IA

### Session 81: Pearson Sponsor Showcase

General 147A

#### Power Up with Scott Foresman—Addison Wesley enVisionMATH

**Tim Rogers**, Pearson, Glenview, IL

Students live in a world of iPods, instant messages, videos, and computer games. This workshop will demonstrate how the power of technology can provide greater access to mathematics content for more students, while making monitoring of student progress easier for teachers.

### Session 82: Pearson Technology Showcase

General 147B

#### Improving Student Success Through Better Engagement—Math XL for School

**Sandee House**, Pearson Consultant, Decatur, GA

Appealing and motivational for today's students through rich, multi-media resources, MathXL allows teachers to focus on important aspects of teaching, such as measuring learning outcomes and identifying students who need help, while students receive a customized learning experience with automatic grading, immediate feedback, multiple help resources, and practice, practice, practice!

## Monday 4:00–5:00

### Session 83: Major Session

General 146ABC

#### **Educational Gaming—A Trend Line to the Future**

**Ntiedo Etuk**, Co-Founder and CEO, Tabula Digita, Inc., New York, NY

Examples of the latest educational games, research results, and video footage will demonstrate the remarkable effects of using educational games in learning. Game On!

*Presider:* Janie Zimmer, Former NCSM Eastern Region 2 Director, Reading, PA



**Ntiedo (NT) Etuk** is Co-Founder, Chairman and CEO of Tabula Digita, and the creator of the award winning DimensionM math series. He worked for a number of years managing the creation, implementation, and analysis of various consumer products for Bank One and Citigroup. He founded

Tabula Digita just prior to beginning work with Citigroup where he was selected to work directly with the Chief of Staff to Citigroup's President. Etuk left Citigroup in 2004 to focus on Tabula Digita full time.

During his years in corporate America, Etuk spent a considerable amount of time tutoring mathematics both in The Big Brothers Big Sisters program and outside, where he learned some of the techniques that could be used to engage today's student in learning, and more importantly those that could not.

**Session 84**  
General Strand 3 143AB  
**Providing an International Lens to Curriculum Leadership: Achieve's International Benchmarking Project**

Achieve has analyzed the content and performance expectations of K-12 mathematics standards from over a dozen countries. This session will focus on the findings of this work and its implications for curriculum leaders working to implement relevant and meaningful standards and curricula.

**Kaye Forgione**, Achieve, Inc., Washington, DC  
**Laura Slover**, Achieve, Inc., Washington, DC

**Session 85**  
General Strand 1 143C  
**Effective Classroom Practices that Bring ALL Students into the Mathematics Community!**

We will connect the research on misconceptions of scaffolding instruction to engage all learners in the classroom. Strategies for connecting prior knowledge, revising misconceptions, and developing mathematical

thinking will be explored. We will also discuss implications for intervention for students who have significant gaps.

**Cindy Fielder**, America's Choice, Washington, DC

**Session 86**  
General Strand 2 144BC  
**Developing Instructional Leadership in Mathematics: Accepting Responsibility for Every Student**

In this interactive session, we will investigate ways to support instructional leadership (principals, assistant principals) in mathematics at all grades. We will examine the nature of observation in standards-based classrooms, consider ways to interact with teachers around classroom observations, and develop understanding of differentiation strategies and opportunities within mathematical curricula.

**Cathy Martin**, Denver Public Schools, Denver, CO  
**Becky Sauer**, Denver Public Schools, Denver, CO  
**Kris O'Clair**, Denver Public Schools, Denver, CO

**Session 87**  
General Strand 1 150A  
**An Examination of Gender Differences in Language Used by Parents and Children Working on Mathematical Tasks**

There are many aspects of communication between parents and children as they explore tasks together. Participants will examine video related to vocabulary use, explanations, questioning, and encouragement as parents and children explore tasks in geometry, patterning, and number. An analysis of gender differences will be explored.

**Melfried Olson**, University of Hawaii at Manoa, Honolulu, HI  
**Claire Okazaki**, University of Hawaii at Manoa, Honolulu, HI  
**Judith Olson**, University of Hawaii at Manoa, Honolulu, HI

**Session 88**  
General Strand 4 150B  
**From Compliance to Commitment: Implementing a District-Wide Portfolio Initiative**

How do you help teachers engage in focused conversations around student work? In this session we will share the journey of a large urban district's move from collecting student work to having collaborative conversations around student work leading to improved student achievement.

**Astrid Fossum**, Milwaukee Public Schools, Milwaukee, WI  
**Mary Mooney**, Milwaukee Public Schools, Milwaukee, WI  
**Beth Schefelker**, Milwaukee Public Schools, Milwaukee, WI

**Session 89**  
General Strand 3 151A  
**Digging Deeper for Systemic Alignment and Improved Mathematics Instruction**

There are many factors that contribute to the status of a "low-performing" school. Research shows that a primary factor is systemic misalignment of mathematics assessment, standards, curriculum, and instruction. This session will discuss the importance of data, standards analysis, and steps a collaborative team should take to ensure systemic alignment.

**Angie Watson**, Region 16 Education Service Center, Amarillo, TX



## Monday 4:00-5:00 (Regular continued)

### Session 90

Intermediate (3–5) Strand 2 152B

#### How Urban Districts Have Achieved Sustainability in Improving Mathematics Teaching and Learning

This session will describe the process of taking generalist elementary and middle school teachers and developing them into mathematics coaches and specialists by presenting a district/university partnership working to empower district personnel to assume responsibility for improving the teaching and learning of mathematics.

Anne Collins, Lesley University, Cambridge, MA

### Session 91

Middle (6–8) Strand 2 144A

#### Developing Leadership in Site-Based Coaches

Learn how to build the leadership of site-based coaches while they work with students and teachers. Mathematics Instructional Support Teachers are making an impact on student achievement.

Roberta Girardi, Howard County Public School System, Ellicott City, MD

Karen Vaden, Howard County Public School System, Ellicott City, MD

### Session 92

Secondary (9–12) Strand 5 152A

#### Leading the Way in Implementing Technology in Mathematics Education: Introduction to Teaching with the TI-Nspire Handhelds

Participants will experience different teaching activities that will incorporate the capabilities of the new TI-Nspire handhelds. Participants will get hands-on experiences that will demonstrate the power and creativity that can be evidenced through the implementation of these new handheld computers in teaching high school mathematics.

Jim Austin, Bullitt County Public Schools, Shepherdsville, KY

### Session 93: Key Curriculum Press Sponsor Showcase

General

147A

#### Beautiful Mathematics—How Successful Approaches Change Students' Lives

Jo Boaler, University of Sussex, Brighton, England, United Kingdom

We will watch students engage in problem solving and consider the ways that students' lives are changed when they are introduced to the beauty and diversity of mathematics.

### Session 94: CASIO Technology Showcase

General

147B

#### Experience the NEW Functions and Interface of CASIO's *fx*-ES Plus Scientific Calculators

Nevels Nevels, St. Louis Public Schools, St. Louis, MO

Experience the newest innovations in calculators from CASIO. Learn about classroom tools and strategies that create an easier, more complete teaching and learning experience. Plus, get a glimpse of our newest online training, customized professional development programs, and the FX9860G Slim graphing calculator, designed to make mathematics easy and affordable!



## NCSM Regional Leadership Team Meeting (Monday 5:15–6:45)

Session 95

(by invitation only)

151B

This meeting of the NCSM Regional Leadership Teams and NCSM Regional Directors will focus on the critical work of NCSM for 2009–2010. This meeting is for all those invited to serve on the Regional Teams.

Facilitators: Timothy D. Kanold, NCSM President and Diane J. Briars, NCSM President-Elect